

ABSTRACT OF THE DISCLOSURE

A boat lift braking system includes a threaded shaft driven by the boat lift motor. A torsion tube disposed about the shaft carries an interiorly threaded nut that interengages the peripheral threads of the shaft. A rotor is mounted to the nut adjacent a brake pad that is supported by a ratchet component. A pawl mechanism cooperates with the ratchet component for limiting rotation of the ratchet component in a first direction and permitting rotation of the ratchet component about the shaft in a second direction. The torsion tube is connected through a reduction apparatus to the winder of the boat lift. When the lift is at rest, a torsion spring drives the torsion tube and rotor against the brake pad and the ratchet component interlocks with the pawl mechanism to hold the lift at a desired elevation. When the motor is driven to lower the lift, the shaft is driven within the torsion tube such that the rotor momentarily disengages the pad. Immediately thereafter, the torsion spring forces the rotor back against the pad and these counteracting forces continuously repeat to provide a controlled descent. When the motor is operated to raise the lift, the shaft is driven relative to the torsion tube such that the rotor and pad interlock. The ratchet component disengages the pawl and the torsion tube turns so that the lift can be elevated.